

Amendments To The Claims

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. (currently amended) Regulating device ~~(1)~~ for the linear regulation of an actuating element ~~(2)~~ which is connected for movement to a ball spindle drive ~~(3)~~ for the conversion of a rotational movement into a linear movement, whereby the rotational movement can be transferred to the spindle drive ~~(3)~~ from at least one motor ~~(4, 5, 6, 7)~~ via a gear unit ~~(8, 9)~~, ~~characterised~~ characterized in that the gear unit ~~(8, 9)~~ exhibits a self-locking, helically toothed spur-wheel gear ~~(10)~~, which is formed as a double helical gear ~~(11, 12)~~ with at least one first ~~(17)~~ and second spiral-toothed gearwheel ~~(18, 19)~~, whereby in each case at least one motor ~~(4, 5, 6, 7)~~ is arranged at both sides of the ball spindle drive ~~(3)~~ and each of the motors is connected for movement with a second spiral-toothed gearwheel ~~(18, 19)~~.
2. (currently amended) Regulating device according to claim 1, ~~characterised~~ characterized in that a ball nut ~~(13)~~ of the ball spindle drive ~~(3)~~ is supported rotationally, but axially immovable in a housing ~~(14)~~ of the regulating device ~~(1)~~ and a rotating spindle ~~(15)~~ of the ball spindle drive ~~(3)~~ is connected for movement to the actuating element ~~(2)~~.
3. (currently amended) Regulating device according to claim 1 ~~or 2~~, ~~characterised~~ characterized in that the rotating spindle ~~(15)~~ and the bar shaped actuating element ~~(2)~~ are arranged one behind the other in the axial direction.
4. (currently amended) Regulating device according to claim 2 ~~or 3~~, ~~characterised~~ characterized in that
the ball nut ~~(13)~~ is connected to a first spiral-toothed gearwheel ~~(17)~~ and the motor ~~(4, 5, 6, 7)~~ to the second spiral-toothed gearwheel ~~(18, 19)~~ of the double helical gear ~~(11, 12)~~.
5. (currently amended) Regulating device according to claim 1 ~~one of the previous claims~~, ~~characterised~~ characterized in that the motor ~~(4, 5, 6, 7)~~ is an electric motor.
6. (currently amended) Regulating device according to claim 1 ~~one of the previous claims~~, ~~characterised~~ characterized in that both second spiral-toothed gearwheels ~~(18, 19)~~ engage the first spiral-toothed gearwheel ~~(17)~~.

7. (currently amended) Regulating device according to claim 1 ~~one of the previous claims, characterised~~ characterized in that the drive shafts (20, 21) of the motors (4, 5, 6, 7) arranged at both sides run parallel to one another.

8. (currently amended) Regulating device according to claim 1 ~~one of the previous claims, characterised~~ characterized in that at least two motors (4, 5, 6, 7) are arranged on each drive shaft (20, 21).

9. (currently amended) Regulating device according to claim 1 ~~one of the previous claims, characterised~~ characterized in that a reduction gear (22), in particular a so-called harmonic drive (23), is arranged between the drive shaft (20, 21) and the second spiral-toothed gearwheel (18, 19).

10. (currently amended) Regulating device according to claim 9, characterised in that the drive shaft (20, 21) is connected for movement with the flexible, cup-shaped toothed sleeve (24) of the harmonic drive (23).

11. (currently amended) Regulating device according to claim 1 ~~one of the previous claims, characterised~~ characterized in that a diagonal angle (25) of the helical gearing of the first (17) and/or the second spiral-toothed gearwheel (18, 19) is in the range from 50 to 90° and particularly in the range from 65 to 85°.

12. (currently amended) Regulating device according to claim 1 ~~one of the previous claims, characterised~~ characterized in that the transmission ratio of the double helical gear (11, 12) is between $i = 25$ and $i < 1$.

13. (currently amended) Regulating device according to claim 1 ~~one of the previous claims, characterised~~ characterized in that the housing (14) is formed as a module housing (27) which can be flange-mounted on a control mechanism (26), which is particularly deployed in the field of gas and/or oil supply.

14. (currently amended) Regulating device according to claim 13, ~~characterised~~ characterized in that the module housing (27) exhibits a first and second housing half (28, 29), whereby the motor (4, 5, 6, 7) and the ball spindle drive (3) are located in the first housing half (28).

15. (currently amended) Regulating device according to claim 13 ~~or 14~~, ~~characterised~~ characterized in that an intermediate cover (30) is arranged within the module housing (27) for at least single-ended support of the second spiral-toothed gearwheels (18, 19).

16. (currently amended) Regulating device according to claim 15, ~~characterised~~ characterized in that a position sensor (31) for the acquisition of the position of the rotating spindle (15) and/or the ball nut (13) is arranged on the intermediate cover (30).

17. (currently amended) Regulating device according to claim 1 ~~one of the previous claims~~, ~~characterised~~ characterized in that the first spiral-toothed gearwheel (17) is mounted, in particular releasably, on an end (32) of the ball nut (13) facing away from the actuating element (2).

18. (currently amended) Regulating device according to claim 2 ~~one of the previous claims 2 to 17~~, ~~characterised~~ characterized in that an intermediate ring (34), in particular capable of being screwed externally onto the ball nut, is arranged between the ball nut (13) and the first spiral-toothed gearwheel (17).

19. (currently amended) Regulating device according to claim 2 ~~one of the previous claims 2 to 18~~, ~~characterised~~ characterized in that the ball nut (18) is held immovably in the axial direction by pivot bearings (35) and a retention ring (36) which is mounted in the housing (14), releasably where applicable.

20. (currently amended) Regulating device according to claim 2 ~~one of the previous claims 2 to 19~~, ~~characterised~~ characterized in that the actuating element (2) and/or the rotating spindle (15) are supported rotationally rigidly in the housing (14), in particular using a splined shaft (37).

21. (currently amended) Regulating device according to claim 5 ~~one of the previous claims 5 to 20~~, ~~characterised~~ characterized in that the electric motors (4, 5, 6, 7) are synchronized.

22. (currently amended) Regulating device according to claim 1 ~~one of the previous~~
~~claims, characterised~~ characterized in that the first ~~(17)~~ and second spiral-toothed gearwheels
~~(18, 19)~~ exhibit 1 to 10, preferably 1 to 7 and especially preferably 1 to 4 teeth ~~(38)~~.

23. (currently amended) Regulating device according to claim 1 ~~one of the previous~~
~~claims, characterised~~ characterized in that the drive shafts ~~(20, 21)~~ are synchronised in their
rotational movements using a mechanical coupling device ~~(53)~~.